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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,353	12/16/2003	Jennifer Johnson	JJ-645	6003
37282	7590	08/06/2004	EXAMINER	
HOWARD J. GREENWALD P.C. 349 W. COMMERCIAL STREET SUITE 2490 EAST ROCHESTER, NY 14445-2408			COLILLA, DANIEL JAMES	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

3m

<b>Office Action Summary</b>	<b>Application No.</b> 10/737,353	<b>Applicant(s)</b> JOHNSON ET AL.	
	<b>Examiner</b> Dan Colilla	<b>Art Unit</b> 2854	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2003 and 08 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 42-46 is/are allowed.
- 6) ☒ Claim(s) 1-8, 15-24, 27, 29, 30, 32, 35 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 9-14, 25, 26, 28, 31, 33, 34, 36 and 37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20040308</u>  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **429** (as shown in Figure 5). Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because of the following informalities: on pages 23-24, the statement that, "affixed to the back surface 248 of the ribbon substrate 251 is the back-coating 252" does not appear to be correct. Figure 5 of applicant's drawings shows that surface 248 and back coating 252 do not contact one another.

Appropriate correction is required.

***Claim Objections***

3. Claims 1-39 are objected to because of the following informalities:

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In claim 1, applicant's recitation of, "said first front side is comprised of a multiplicity of first particles" appears to contradict the establishment of front and back sides in the specification as defined on page 22, lines 3-8, it appears that applicant has established the lower sides of the layers (as shown in Figure 5) as the front sides or the face sides. Correction and/or clarification is required.

In claim 19, lines 4-6, the remainder of the claim beginning with, "wherein;" appears to be a double recitation of that which has already been recited in claim 1.

Also in claim 19, "said first front side of said flexible support" has no proper antecedent basis in the claims. Previously applicant has only recited a first front side of the *first flexible section*.

Additionally, in the specification, page 22, lines 3-8, it appears that applicant has established the lower sides of the layers (as shown in Figure 5) as the front sides or the face sides. However, in claim 19, lines 1-3, applicant recites that the, "first front side of said flexible support of said first flexible section is coated with a first layer; said first layer is comprised of said multiplicity of first particles." It would appear that applicant is referring to the layer 252 since this is the layer with the first particles. However, this layer is on the *back* side of the flexible substrate as shown in Figure 5 not the front side as recited in the claim. Correction and/or clarification is required.

Claim 35 is objected to because it is not clear how the first and second sections can be connected by splicing tape and be arranged such that the first *front* side of said first flexible section is congruent with said second *back* side of the thermal transfer ribbon (as recited in claim 3). It appears from applicant's drawings that the language of claim 3 and of claim 35 are of two different embodiments that are not compatible.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 2002/0160160).

Suzuki et al. discloses the claimed thermal printing assembly except for the specific Sheffield smoothness and Knoop hardness values. Suzuki et al. discloses a thermal transfer sheet that is flexible as indicated by the ability to wind the sheet as mentioned at the end of paragraph [0059] of Suzuki et al. This sheet has a first flexible section (backside layer) which includes a multiplicity of first particles (filler) on a surface of the backside layer (see paragraph [0058], lines 1-8). While Suzuki et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. As pointed out by Suzuki et al., when abrasion degree is too low refuse is likely to occur in the print head, and when abrasion degree is too high the protective layer on the print head is damaged (paragraph [0058], last five lines). Additionally, it is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials.

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6. Claims 1-3, 35 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (JP 5-139003).

With respect to claim 1, Yamaguchi et al. discloses the claimed thermal printing assembly except for the specific Sheffield smoothness and Knoop hardness values. Yamaguchi et al. discloses a thermal transfer medium that is flexible as shown in Figure 1. This sheet has a first section 1 with a first front side and a first back side which includes a multiplicity of first particles as mentioned in paragraph [0020] of the machine translation on a surface of the first section 11 (see Figure 2). While Yamaguchi et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials.

With respect to claim 2, Yamaguchi et al. discloses a second flexible section 2 attached to the first flexible section in which the second flexible section 2 a is thermal transfer ribbon.

With respect to claim 3, the second flexible section 2 is a thermal transfer ribbon with an imaging side 15 and a second back side 14 that is congruent with the first flexible section.

To the extent that claim 35 can be understood (see above objection to claim 35) it appears that Yamaguchi et al. discloses the claimed language. Yamaguchi et al. discloses that the first flexible section 1 is joined to the second flexible section 2 by splicing tape 4 as shown in Figure 2 of Yamaguchi et al.

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With respect to claim 38, Yamaguchi et al. discloses a core 6 such that the first flexible section 1 is proximal to the core 6 and the second flexible section 2 is distal to the core as shown in Figure 1 of Yamaguchi et al.

With respect to claim 39, Yamaguchi et al. discloses a core 7 such that the second flexible section (the leader tape section 3 is being considered part of the second flexible section) is joined to the core 7 such that the it is proximal to the core 7 and the first section is distal to the core 7 as shown in Figure 1 of Yamaguchi et al.

With respect to claim 40, Yamaguchi et al. discloses a thermal printing assembly except for the specific Knoop hardness and Sheffield smoothness values. Yamaguchi et al. discloses a thermal printing assembly including a first flexible section 2, a second flexible section 1 and a third flexible section 4 as shown in Figure 2 of Yamaguchi et al. Section 1 is a thermal transfer ink ribbon and section 2 includes a multiplicity of particles as mentioned in paragraph [0020] of the machine translation of Yamaguchi et al. and the first section is attached to the second section. While Yamaguchi et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials.

7. Claims 1-3, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (JP 62-286789) in view of Wen et al. (US 5,865,548).

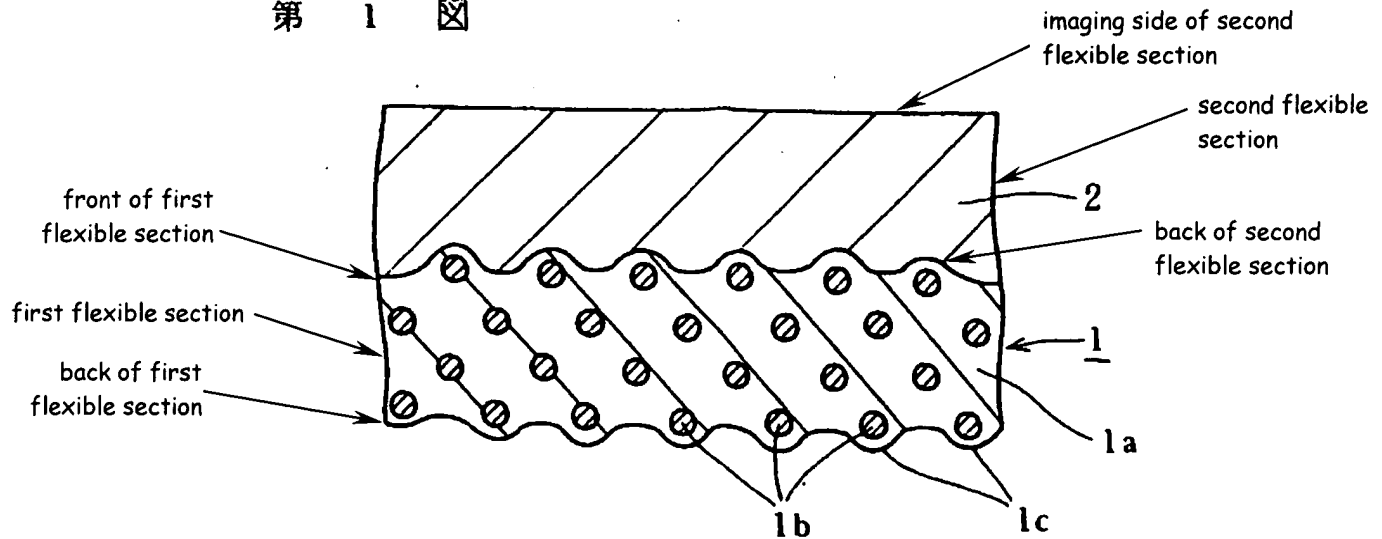
With respect to claim 1, Saito discloses the claimed thermal printing assembly except for the specific Sheffield smoothness and Knoop hardness values and the flexibility of the first section. Saito discloses a thermal printing assembly with a first section 1 having a first front side and a first back side as shown in Figure 1 of Saito. The first section 1 includes a multiplicity of first particles as mentioned in paragraph 1b. While Saito does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials. Wen et al. teaches a thermal assembly 40 that is flexible as shown in Figure 3 of Wen et al. It would have been obvious to combine the teaching of Wen et al. with the thermal assembly disclosed by Saito for the advantage of conveniently storing the thermal assembly by wrapping it on a spool (US 5,865,548).

With respect to claim 2, Saito discloses a second section 2 comprised of a thermal transfer material. Wen et al. teaches a thermal transfer material that is flexible and in ribbon form.

With respect to claim 3, Saito et al. teaches an imaging side and a back side of the material 2 such that the back side of material 2 is congruent with the front side of section 1 as shown below in the Figure taken from Saito et al.:



第 1 図



With respect to claims 15-16, Saito in view of Wen et al. discloses a flexible support 1a as the first flexible section, and that support can be made of polyester.

With respect to claim 18, the base material 1a can be considered a paper.

8. Claims 1-2, 4 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. (JP 2001-213024).

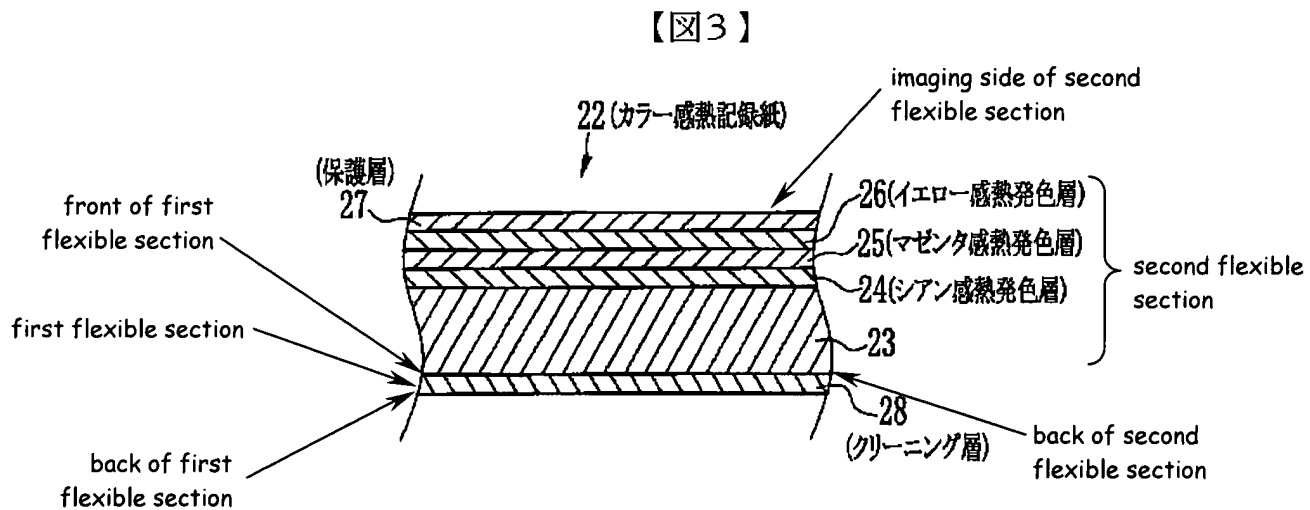
With respect to claim 1, Miyazaki et al. discloses the claimed thermal printing assembly except for the specific Sheffield smoothness and Knoop hardness values. Miyazaki et al. discloses a thermal printing assembly including a first flexible section 28 as shown in Figure 3 of Miyazaki et al. The first section is flexible enough so that it can be fed out of the paper cassette 13 as shown in Figure 1 of Miyazaki et al. The first flexible section 28 includes particles as disclosed in paragraph [0039] of the machine translation of Miyazaki et al. While Miyazaki et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder

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materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials.

With respect to claim 2, Miyazaki et al. discloses a second flexible section, layers 23-26, as shown in Figure 3 of Miyazaki et al. These layers form a thermally sensitive media that is a direct thermal sensitive substrate as mentioned in paragraph [0035] of the machine translation of Miyazaki et al.

With respect to claim 4, the thermally sensitive media is a direct thermal sensitive substrate with a first imaging side and a second back side congruent with a first front side of the first flexible section 28 as shown below in the image taken from Figure 3 of Miyazaki et al.:



With respect to claim 41, Miyazaki et al. discloses the claimed thermal printing assembly except for the specific Sheffield smoothness and Knoop hardness values.

Miyazaki et al. discloses a thermal printing assembly including a first flexible section 28 as shown in Figure 3 of Miyazaki et al. The first section is flexible enough so that it can be fed out of the paper cassette 13 as shown in Figure 1 of Miyazaki et al. The first

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flexible section 28 includes particles as disclosed in paragraph [0039] of the machine translation of Miyazaki et al. Another flexible section 26 is a direct thermal sensitive substrate, and the two sections are attached as shown in Figure 3 of Miyazaki et al. While Miyazaki et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials.

9. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (JP 62-286789) in view of Wen et al. (US 5,865,548) as applied to claims 1-3, 15-16 and 18 above, and further in view of Yamaguchi et al. (JP 5-139003).

With respect to claims 5-6, Saito in view of Wen et al. discloses the claimed thermal assembly except that the particle size is not known to the examiner. However, Yamaguchi et al. teaches that it is known to use 100 percent particles that are 0.3-3 micrometers in size. It would have been obvious to one of ordinary skill in the art through routine experimentation. As Yamaguchi et al. points out in paragraph [0021] of the machine translation of Yamaguchi et al., particles smaller than 0.1 micrometers is too small to be effective in cleaning, and particles larger than 5 micrometers can easily damage the printing head.

With respect to claims 7-8, as mentioned above, while Saito in view of Wen et al. does not disclose a specific Knoop hardness value, such a value could have been determined by one of ordinary skill in the art through routine experimentation.

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10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (JP 62-286789) in view of Wen et al. (US 5,865,548) as applied to claims 1-3 above, and further in view of Suzuki et al. (US 2002/0160160).

Saito in view of Wen et al. discloses the claimed thermal printing assembly except for the particular polymeric material of the first flexible section. However, Suzuki et al. teaches a first flexible section (backside layer) of a thermal printing assembly that can be made of cellulose acetates or chlorinated resins (Suzuki et al., paragraph [0055]). It would have been obvious to one of ordinary skill in the art to select a known material used for a known purpose from a group of known materials used for that purpose.

11. Claims 1-3, 15, 19-21, 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Defieuw et al. (US 5,378,676) in view of Wen et al. (US 5,865,548).

With respect to claim 1, Defieuw et al. discloses the claimed thermal assembly except for the specific Sheffield smoothness and Knoop hardness values. With respect to claim 1, Defieuw et al. discloses a thermal assembly including a first section (heat resistant layer and support layer) with a first front side and a first back side including a multiplicity of particles disposed in the first front side (Defieuw et al., col. 2, lines 58-68). While Defieuw et al. does not disclose specific Sheffield smoothness and Knoop hardness values, these values could have been determined by one of ordinary skill in the art through routine experimentation. It is known that harder materials can undesirably abrade less hard materials and less smooth materials can undesirably catch or create excessive friction when sliding against other materials. Wen et al. teaches a thermal assembly 40 that is flexible as shown in Figure 3 of Wen et al. It would have been

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obvious to combine the teaching of Wen et al. with the thermal assembly disclosed by Saito for the advantage of conveniently storing the thermal assembly by wrapping it on a spool (US 5,865,548).

With respect to claim 2, Defieuw et al. discloses a second flexible section (dye layer) joined to the first flexible section (Defieuw et al., col. 2, lines 58-68). The second flexible section is comprised of thermally sensitive media which is a thermal transfer ribbon (Defieuw et al., col. 1, lines 7-10).

With respect to claim 3, the dye layer has an imaging side and a second back side as is inherent in the "layer" structure. The first flexible section is congruent with the second back side of the thermal transfer ribbon.

With respect to claim 15, Defieuw et al. in view of Wen et al. discloses that the first flexible section (heat resistant layer and support layer) includes a flexible support layer (Defieuw et al., col. 2, lines 58-68).

*Due the above mentioned objections to claim 19 and the above objection to the specification, the structure recited in claim 19 has become unclear. It appears that applicant may be attempting to recite the structure shown in Figure 5 of applicant's drawings, specifically the flexible substrate 251 and heat resistant back coating 252. In order to further the prosecution of the patent the claim will be examined as such.*

With respect to claim 19, Defieuw et al. discloses that the first flexible section (heat resistant layer and support layer) includes a first layer (heat resistant layer) on a side of the flexible support. The first layer is comprised of a multiplicity of first particles (Defieuw et al., col. 2, lines 58-68).

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With respect to claim 20, the first particles are inorganic (Defieuw et al., col. 2, line 64).

With respect to claim 21, Defieuw et al. discloses that the particles can be clay, mica or talc (col. 3, lines 47-53).

With respect to claim 24, Defieuw et al. discloses that mixtures of organic and inorganic particles can be used in the first flexible section (Defieuw et al., col. 4, lines 55-57).

With respect to claim 27, Defieuw et al. discloses that the first flexible section can be made from synthetic materials to form a synthetic layer or paper (Defieuw et al. col. 12, lines 39-51).

12. Claims 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Defieuw et al. (US 5,378,676) in view of Wen et al. (US 5,865,548), as applied to claims 1-3, 15, 19-21, 24 and 27 above, and further in view of Kubodera et al. (JP 5-116428).

With respect to claim 22, Defieuw et al. in view of Wen et al. discloses the claimed thermal assembly except for the organic particles. However, Kubodera et al. teaches a thermal assembly that includes a first flexible layer including organic particles (Kubodera et al., paragraph [004] of the machine translation). It would have been obvious to combine the teaching of Kubodera et al. with the thermal assembly disclosed by Defieuw et al. in view of Wen et al. for the advantage of the increased slipping performance of the thermal assembly on the printhead.

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With respect to claim 23, Kubodera et al. teaches the use of polymethylmethacrylate particles as the organic particles (Kubodera et al., paragraph [0032] of the machine translation).

13. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Defieuw et al. (US 5,378,676) in view of Wen et al. (US 5,865,548) as applied to claims 1-3, 15, 19-21, 24 and 27 above, and further in view of Araki et al. (JP 10-296933).

Defieuw et al. in view of Wen et al. discloses the claimed thermal assembly except for the oriented polypropylene synthetic paper. However, Araki et al. teaches a thermal ribbon with a biaxially oriented polypropylene film. It would have been obvious to combine the teaching of Araki et al. with the thermal assembly disclosed by Defieuw et al. in view of Wen et al. for the thermal resistance and excellent slipping properties of the oriented polypropylene (Araki et al., last three lines of the machine translation).

14. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Defieuw et al. (US 5,378,676) in view of Wen et al. (US 5,865,548) as applied to claims 1-3, 15, 19-21, 24 and 27 above, and further in view of Bellmann et al. (US 2004/0121068).

Defieuw et al. in view of Wen et al. discloses the claimed thermal assembly except for the polyethylene synthetic paper. However, Bellmann et al. teaches a thermal ribbon with a polyethylene substrate 210 (see Figure 2 and paragraph [0091] of Bellmann et al.). It would have been obvious to combine the teaching of Bellmann et al. with the thermal assembly disclosed by Defieuw et al. in view of Wen et al. for the advantage of the light emitting material in the transfer material useful for electroluminescent displays.

15. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (US 2002/0160160) as applied to claim 1 above, and further in view of Kutami et al. (JP 10-226097).

Suzuki et al. discloses the claimed thermal assembly except for the first back side being comprised of a multiplicity of second particles. However, Kutami et al. discloses that both sides of a medium base 2 can be coated with granular inorganic or organic solid matter (last sentence of "Solution" portion of English abstract). It would have been obvious to combine the teaching of Kutami et al. with the thermal assembly disclosed by Suzuki et al. for the advantage of being able to clean the printheads of a printer having two printhead opposed to one another for double sided printing.

***Allowable Subject Matter***

16. Claims 42-46 are allowed.

17. Claims 9-14, 25-26, 28, 31, 33-34 and 36-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter:



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Claims 9-14 have been indicated as containing allowable subject matter primarily because the prior art of record does not teach the amount of particles per square millimeter as recited in claims 9 and 10.

Claims 25 has been indicated as containing allowable subject matter primarily for the opacification particles with a refractive index greater than 1.4

Claim 26, 36 and 37 has been indicated as containing allowable subject matter primarily for the multiplicity of second particles with the specified Knoop hardness and Sheffield smoothness values.

Claim 28 and 31 have been indicated as containing allowable subject matter primarily for the clay modified polypropylene synthetic paper.

Claim 33 has been indicated as containing allowable subject matter primarily for the differing size of the second particles.

Claim 34 has been indicated as containing allowable subject matter primarily for the differing chemical composition of the second particles.

Claims 42-46 have been allowed primarily for the thickness of the flexible section and the density of the first particles per square millimeter.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (571)272-2157. The examiner can normally be reached Mon.-Thur. between 7:30 am and 6:00 pm. Faxes regarding this application can be sent to (703)872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (571)272-2168. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 2, 2004

A handwritten signature in black ink, appearing to read 'D. Colilla', with a stylized flourish at the end.

Daniel J. Colilla  
Primary Examiner  
Art Unit 2854